

Better
Bus
Project

Making transit
better together

Bus Network Redesign

MBTA Board of Directors
November 17, 2022



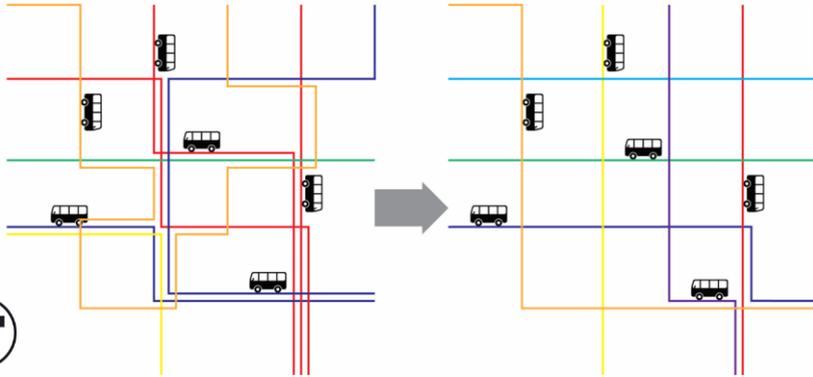
What is the Better Bus Project (BBP)?

A series of integrated projects across the authority to transform and create a better experience for both current and future bus riders



What is Bus Network Redesign?

A complete re-imagining of the MBTA's bus network to better reflect the travel needs of the region and create a better experience for current and future bus riders.



Why are we doing this?

The region has changed.

But our bus network has not changed with it.

Transit is essential to the region's economy. And the bus serves our most transit-dependent populations.

However, there isn't enough frequent service when people need it, and the network is difficult to understand due to route variations/deviations.

So it's essential that our bus network changes.

Bus Network Redesign Project Timeline

Bus Network Redesign (2020-Ongoing)

2020



Research + Service Design

Learn about travel patterns and preferences of current and potential future riders + Develop service design principles and metrics

Summer/Fall 2021



Review Feedback

Examine feedback from riders from 2019 route change and other BBP initiatives



Draft Metrics

To define what success looks like



Outreach Phase 1

Are we getting people to the places they need and want to go + is transit a good option to get them there?

Summer/Spring 2022



Draft Network

Proposal for new bus network



Outreach Phase 2

Public comment on draft bus network map

Fall 2022



Finalize

Final network design based on public comment.



Outreach Phase 3

Rider outreach to review draft map with routes and frequencies.

2023



Implementation

Phase 1 of new bus service.

***We are planning for phases of implementation over five years. Each phase of implementation will vary based on interdependencies of the new network, staff capacity (including operator headcount), and the availability of bus priority infrastructure and other capital projects.**

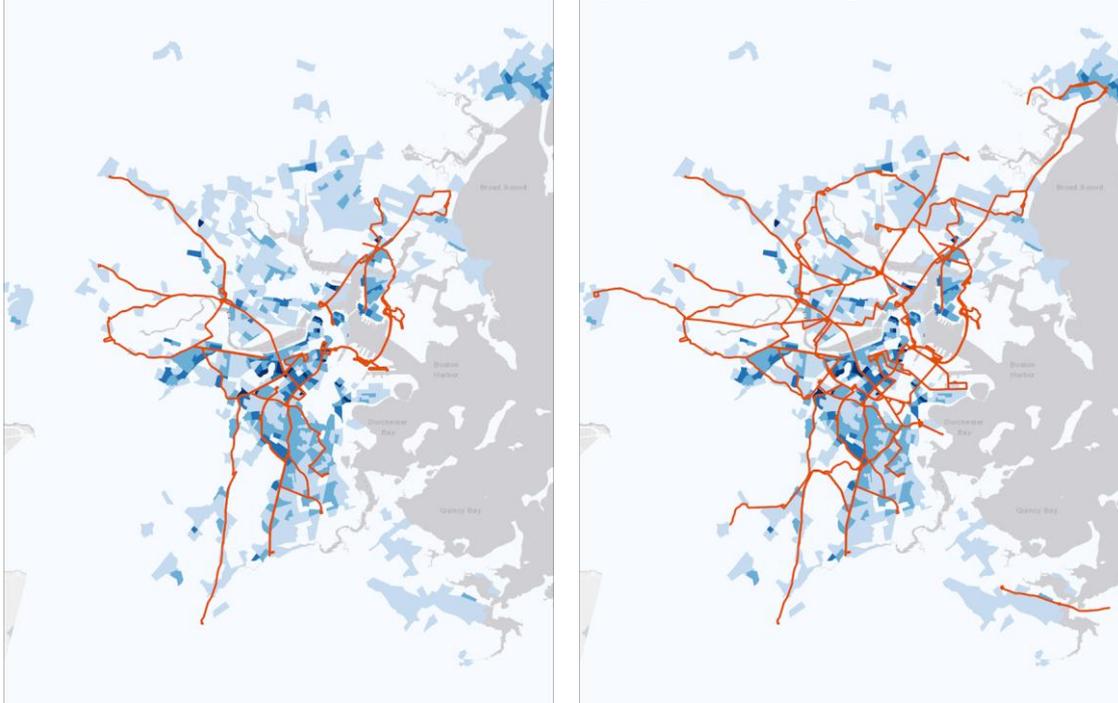
What we are trying to do

- 1 Equity first*, prioritizing the needs of those who depend on buses and need frequent, reliable service**
- 2 More frequent service in busy neighborhoods**
- 3 More all-day service**
- 4 New connections to more places (including non-downtown centers)**
- 5 A network that's simpler and easier to use**
- 6 More transit priority and other infrastructure to improve reliability and accessibility**

***Equity is defined as improving access and quality of service for transit-critical populations**
(low-income populations, people of color, seniors, people with disabilities, or people who live in households with few or no vehicles)

The May 2022 Draft Bus Network proposed better service for low-income populations and communities of color

Frequent service (red) and low-income populations (blue)
Current network (left) and proposed network (right)



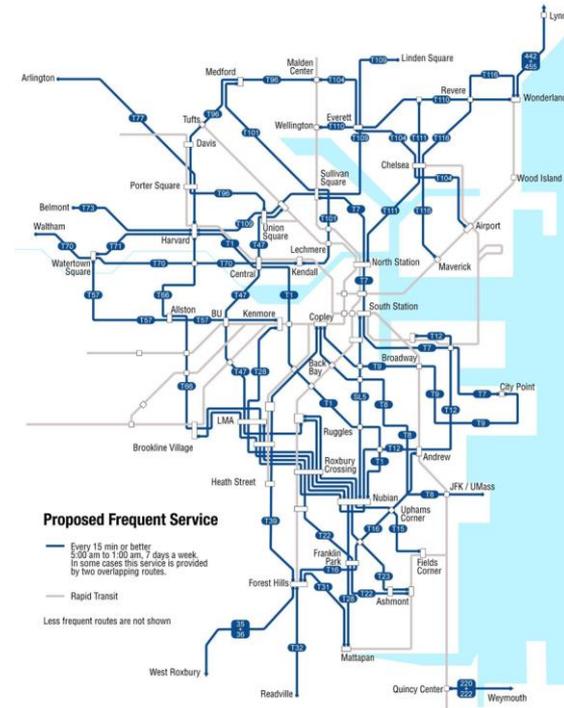
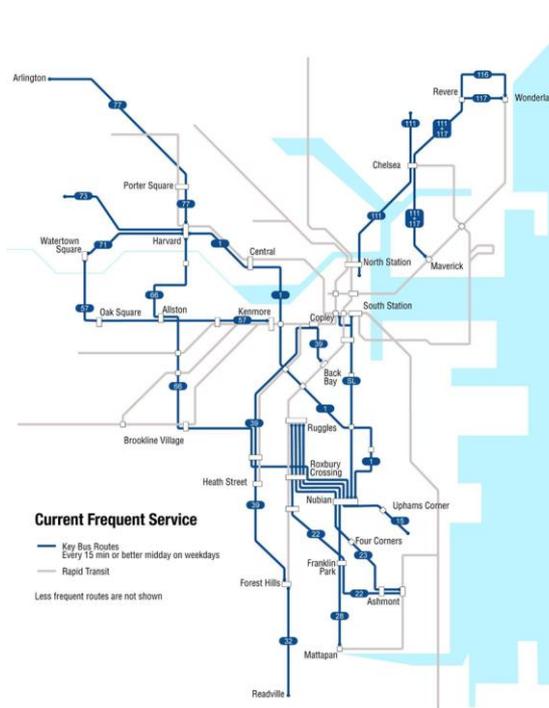
In the Draft Bus Network:

- **40,000 low-income households** gain access to high frequency service.
- **One in every two low-income households** has access to high frequency service.
- **115,000 residents of color** gain access to high frequency service.
- **70% residents of color** have access to high frequency service.

These metrics are being updated for the Revised Network

The Revised Bus Network will:

- **increase service by 25% across the network**
- **double the number of high frequency corridors from 15 to 30**
- **Buses every 15-minutes or better, all-day, 7 days a week**
- **Increase weekend service by 70%**

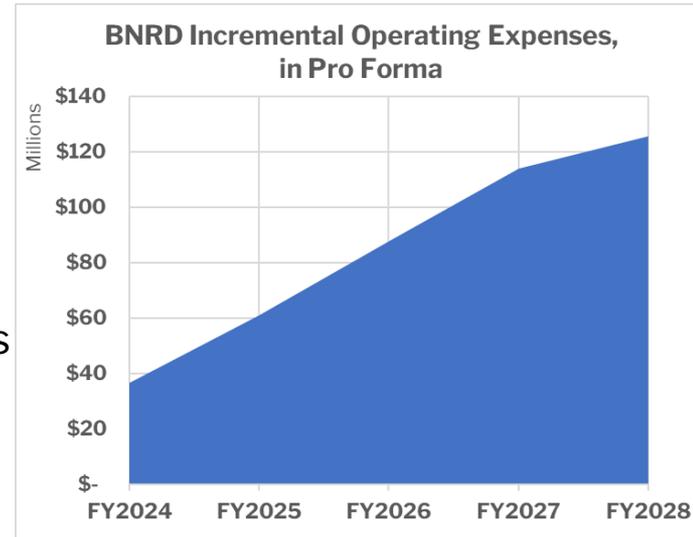


Frequent service, current network (left) and revised network (right)

Operating Budget Approach

The redesigned bus network requires a 25% increase in Bus Service. Those costs, including maintenance, fuel, etc., are budgeted in the MBTA's 5-year pro-forma.

- Increased costs will build up over 5 years, depending on Operator availability
- Bus Operator shortage still a major issue in FY23, and the MBTA will aggressively recruit and retain bus Operators
- Phase One Implementation may focus more on capital improvements
- BNRD will generate some additional fare revenue



Capital Budget Approach

Implementation Timeline

- Capital Funds Cover**
- Roadway Modifications
 - Transit Infrastructure (Bus Lanes, Stops, Layover, Etc.)
 - Signage

Adopt Revised Network

Year 1

Year 2

Year 3

Year 4

Year 5

CIP FY23-2027: ~\$50M allocated to BNRD Implementation

CIP FY24-2028: additional \$311M requested for BNRD Implementation

Beyond FY28: additional \$187M anticipated to be needed



Board approval of the Redesigned Bus Network

Staff seek preliminary approval of the Redesigned Bus Network by the MBTA Board of Directors, with final approval contingent on Board acceptance of the Title VI Analysis

- Board approval would allow the Bus Transformation Office to begin advancing capital projects that will be necessary in order to implement parts of the redesigned network
- Title VI Analysis currently underway and anticipated to be completed by early December
- **Virtual Title VI Analysis Public Meeting scheduled for December 8th, 6:00 PM**

Routes included in the Revised Network



T1	29	52	T73	105	215	442
T7	30	53	74	106	216	450
T8	T31	54	75	108	217	451
T9	T32	55	76	T109	220	455
10	34	56	T77	T110	222	501
11	34E	T57	78	T111	225	504
T12	35	58	80	112	226	505
14	36	59	83	113	230	714
T15	38	60	85	T116	236	716
T16	T39	61	86	119	238	SL1
17	40	62	87	120	240	SL2
18	41	64	89	131	245	SL3
19	42	65	90	132	351	SL4/5
21	43	T66	95	134	354	
T22	44	67	T96	137	426	
T23	45	68	99	201	429	
24	T47	69	100	202	435	
26	50	T70	T101	210	436	
T28	51	T71	T104	211	439	

Proposed Vote

It is hereby VOTED:

That the following service changes, referred to as the Redesigned Bus Network, are approved for implementation beginning in Fiscal Year 2023, consistent with the presentation to the MBTA Board of Directors at the Board meeting on October 27, 2022 entitled: “Bus Network Redesign”, and subject to the Authority’s completion of a Title VI Equity Analysis regarding the services changes and the Board’s approval of such Equity Analysis.



Appendix - Changes made in the Revised Bus Network

Changes made to the draft network proposal

- **Changes were made to 85 of the 133 proposed routes in the May 2022 Draft Bus Network**
- **Changes include new routing, restoration of existing routes, addition or subtraction of routes, extensions of routes, and modifications to frequency and span of service**
- **Changes were made for five primary reasons:**
 - To respond to public feedback received on the draft bus network proposal.
 - To improve access to hospitals, senior centers, and other destinations.
 - To reduce walk distances for seniors and other riders and in locations with challenging topography.
 - To preserve existing one-seat rides to many destinations.
 - To balance resources and stay within the limit of buses available during peak times, and within the overall service limit of 25% more service above the existing network.

Summary of Changes

- **Restoration of existing routes to their current routing (in part or in whole)**
 - 14, 17, 26, 29, 34E, T39, 44, 45, T47, 55, 67, 74, 87, 89, 100, 131, 134, 201, 202, 210, 215, 230, 236, 238, 240, 354, 429, 451, 505
- **Rerouting to better provide better connections to medical facilities, senior housing, and other destinations, or at the request of municipalities**
 - T8, 11, T12, 18, 42, 53, 54, 59, 62, 64, 76, 83, 95, 96, 99, T101, T104, 105, 106, 108, 112, 119, 120, 211
- **Routes added to the Revised Bus Network that were not in the May 2022 draft**
 - 41, T47, 56, 58, 65, 80, 85, 113
- **Frequency or span adjustments (but not route changes)**
 - 30, 52, 78, 132, 216, 225, 226, 245, 435, 504, SL2
- **Routes that were included in the May 2022 draft but are not in the Revised Bus Network (see table in appendix for related changes)**
 - 20, 70, 94, 133, 237, 350

Route	Route Description	What we changed from the May 2022 Proposal
T1	Harvard Sq to Nubian Sq via Back Bay	No change since May proposal
T7	Sullivan to City Point via Charlestown, North Station, and South Station	No change since May proposal
T8	Harbor Point to Copley	Rerouted via Harrison Ave, E Concord St, and E Newton St instead of Albany St and Malden St for stops to be closer to Boston Medical Center
T9	City Point to Copley via Broadway	No change since May proposal
10	City Point to Ruggles via Andrew	No change since May proposal
11	City Point to Tufts Medical Center	Extended to Washington St and Kneeland St for direct access to Tufts Medical Center; extended service to 1AM
T12	Brookline Village to Seaport via Longwood Medical Area, Nubian Sq, and Andrew	Rerouted via Mass Ave, Washington St, and Nubian Sq for better access to Boston Medical Center and to provide an additional connection from Nubian Sq to Boston Medical Center; connects to Orange Line at Roxbury Crossing instead of Ruggles; see route T47 for Longwood Medical Area - Ruggles
14	Roslindale Sq to Nubian Sq via American Legion Hwy	Restored existing route from Roslindale Sq to Nubian Sq; see route 41 for Heath St to Nubian Sq service
T15	Fields Corner to Ruggles via Nubian Sq	Ended route at Ruggles instead of Oak Sq; see route 65 for Ruggles to Brighton connection
T16	Forest Hills to Andrew via Uphams Corner	No change since May proposal
17	Fields Corner to Andrew via Uphams Corner and South Bay Mall	Restored route to maintain service along Boston St
18	Ashmont to JFK/Umass via Fields Corner	Rerouted to Auckland St; rerouted into Fields Corner busway
19	Fields Corner to Ruggles via Nubian Sq	Rerouted to Warren St instead of Humboldt Ave; Rerouted to Malcolm X Blvd instead of Melnea Cass; service remains peak-only; see route 44 for Humboldt Ave service
20		Reverted to existing routes 201 and 202 instead of proposed route 20
21	Ashmont to Forest Hills	No change since May proposal
T22	Ashmont to Longwood Medical Area via Jackson Sq	No change since May proposal
T23	Ashmont to Ruggles via Nubian Sq	No change since May proposal
24	Dedham Mall to Ashmont via Hyde Park and Mattapan Sq	No change since May proposal
26	Ashmont to Gallivan Boulevard	Restored existing Norfolk St/Washington St loop
T28	Mattapan to Kenmore via Nubian Sq, Roxbury Crossing, and Longwood Medical Area	No change since May proposal
29	Mattapan to Jackson Sq via Franklin Field	Restored existing Mattapan to Jackson Sq service via Franklin Field
30	Mattapan Sq to Forest Hills	Adjusted frequency; extended service to 1AM; see route 14 for additional Cummins Hwy service
T31	Mattapan Sq to Forest Hills	No change since May proposal
T32	Readville to Forest Hills via Hyde Park	No change since May proposal



Highlight denotes a route that was changed since the May 2022 proposal.



Route	Route Description	What we changed from the May 2022 Proposal
34	Legacy Place to Forest Hills via Dedham	Rerouted to Washington St instead of Providence Hwy; for service to Dedham Mall transfer to route 24 or 35
34E	Walpole to Forest Hills via Dedham	Restored to existing route; extended service to 1AM; transfer to route 34 for Legacy Place connection
35	Dedham Mall to Forest Hills via Centre St, West Roxbury	No change since May proposal
36	Dedham Mall to Forest Hills via VA Hospital	No change since May proposal
38	West Roxbury to Nubian Sq via Jackson Sq	No change since May proposal
T39	Forest Hills to Copley/Back Bay	Restored to existing route to Copley/Back Bay; see route T47 for connection to Cambridge/Somerville
40	Readville to Forest Hills via Dedham Pkwy	No change since May proposal
41	Heath St to JFK/Umass via Jackson Sq and Nubian Sq	Added a new route 41 from Heath St to JFK/UMass via Jackson Sq, Nubian Sq, and Mass Ave; see route 38 for service from Jamaica Plain to Jackson Sq; see route T15 for service on Dudley St
42	Forest Hills to Broadway via Nubian Sq	Rerouted to Harrison Ave and E Newton St rather than Albany St and Melnea Cass Blvd for better connection to Boston Medical Center
43	Ruggles to Park St	No change since May proposal
44	Jackson Sq to Ruggles via Egleston Sq	Restored route 44 between Jackson Sq and Nubian Sq; transfer to T15 or T23 at Nubian Sq for service to Ruggles; maintained service to 1AM
45	Franklin Park to Ruggles via Nubian Sq	Restored existing service from Franklin Park to Ruggles via Blue Hill Ave
T47	Union Sq to Ruggles via Central Sq and Longwood Medical Area	Restored as high frequency route from Central Sq to Longwood Medical Area and Ruggles; extended from Central Sq to Union Sq
50	Readville to Forest Hills via Fairmount and Hyde Park	No change since May proposal
51	Reservoir to Forest Hills via Roslindale Sq	No change since May proposal
52	VA Hospital West Roxbury to Watertown Yard via Newton Center	Changed to weekday only service
53	Market Place Drive to Woodland via Brandeis University	Extended to Children's Hospital at Waltham and Newton/Wellesley Hospital; rerouted to Market Place Dr instead of Waltham Center; transfer to route 56 for connection to Waltham Center
54	Arlington to Waltham via Belmont	Rerouted via Pleasant St rather than Waverly St in Belmont; changed to end at Waltham Center; frequency modified
55	Jersey St and Queensberry St to Copley	Restored existing service from Queensberry St to Copley; see route 85 for service to Kendall/Longwood Medical Area
56	Watertown to Market Place Drive via Waltham Commuter Rail Station	Added a new route from Market Place Dr to Watertown Sq via Waltham Center, Waltham St, and Crafts St; see route 53 for more connections to Waltham/Newton
T57	Watertown Sq to Kenmore via Newton Corner and Oak Sq	No change since May proposal
58	Market Place Drive to Watertown via Waltham and West Newton	Added a new route from Market Place Dr to Watertown Sq via Waltham Center and West Newton; see route 61 for connections to North Waltham



Highlight denotes a route that was changed since the May 2022 proposal.



Route	Route Description	What we changed from the May 2022 Proposal
59	Needham Junction to Watertown Sq via Newton Highlands	Rerouted to Washington St and Adams St instead of Walnut St
60	Newton Common to Kenmore via Brookline Village and Longwood Medical Area	Ended route at Chestnut Hill Mall instead of Newton Centre
61	North Waltham to Market Place Drive	Ended route at North Waltham - Market Place Dr via Second Ave and Bear Hill Rd; see route 58 for connections to Waltham Center, West Newton, and Watertown; see route 56 for connections to Waltham Center and Watertown via High St, Crafts St, and Washington St
62	Bedford to Alewife via Lexington	Rerouted to serve Acorn Park Dr going inbound
64	Oak Sq to Kendall/MIT via Central Sq	Rerouted service to existing Brooks St and Soldiers Field Rd instead of Faneuil St
65	Brighton to Ruggles via Brookline Village and Longwood Medical Area	Added route to travel between Brighton Center and Ruggles via Longwood Medical Area; see route T15 for Ruggles to Fields Corner Connection
T66	Harvard Sq to Nubian Sq via Brookline Village and Longwood Medical Area	No change since May proposal
67	Turkey Hill to Alewife via Arlington Center	Restored Turkey Hill route to Alewife; rerouted to Mass Ave instead of Route 2; see route 54 for Pleasant St service
68	Harvard Sq to Kendall/MIT	No change since May proposal
69	Harvard Sq to Lechmere	No change since May proposal
70		Replaced proposed medium frequency route 70; see routes 56 and 58 for Market Place Drive to Waltham Center service
T70	Waltham to Kendall/MIT via Watertown and Central Sq	No change since May proposal
T71	Watertown to Harvard Sq	No change since May proposal
T73	Waverly to Harvard Sq	No change since May proposal
74	Belmont Center to Harvard Sq via Concord Ave	Restored service from Belmont Center to Harvard via Concord Ave
75	Belmont Center to Harvard Sq	No change since May proposal
76	Lexington to Alewife	Extended to Lexington Center; rerouted to Acorn Park Dr inbound; serves Lincoln Lab/Civil Air Terminal; added midday service on weekdays
T77	Arlington to Harvard via Porter Sq	No change since May proposal
78	Arlmont Village to Harvard Sq	Extended service to 1AM
80	Burlington to Davis via Woburn, Arlington, and Medford Hillside	Added new service in place of the proposed 350; serves the Burlington Mall; restored route 80 service from Arlington to Davis Sq via Boston Ave; extended service to 1AM
83	Rindge Ave to Central Sq via Porter Sq	Rerouted to maintain Rindge Ave connection to Central Sq
85	Assembly Sq to Ruggles via Union Sq, Kendall/MIT, and Longwood Medical Area	Added new route 85 from Ruggles to Assembly via Longwood Medical Area, Kendall/MIT, and Union Sq



Highlight denotes a route that was changed since the May 2022 proposal.



Route	Route Description	What we changed from the May 2022 Proposal
86	Reservoir to Harvard Sq	No change since May proposal
87	Arlington Center to Lechmere via Clarendon Hill, Davis Sq, and Union Sq	Restored to existing service; extended service to 1AM
89	Davis Sq to Sullivan via Winter Hill	Restored route 89 to serve Davis to Sullivan via Broadway through Winter Hill
90	Clarendon Hill to Assembly Sq via Davis Sq and East Somerville	Ended at Assembly; rerouted to provide Green Line connection at East Somerville Station; frequency increased; see route 113 for connection to Chelsea; see route 87 for connection to Lechmere
94		Removed from proposal; see routes 80, 134, and 354 for alternate service
95	Arlington to Sullivan via Medford Sq	Rerouted to Mystic Ave to Sullivan via Medford Sq; frequency increased; see route 134 for connections to Wellington
T96	Malden Center to Union Sq via Medford Sq, Medford Hillside, and Davis Sq	Rerouted to High St, Winthrop St, and George St; extended to Union Sq via Elm St
99	New England Memorial Hospital to Wellington via Malden Center	Rerouted between Malden Center and Wellington to Commercial St, Medford St, Main St, Belmont St, Hancock St, Broadway, and Gateway Center; extended service to 1AM; see route 108 extension for service to Highland Ave
100	Elm St to Wellington	Restored to existing route; extended service to 1AM
T101	Medford to Kendall/MIT via Sullivan	Restored service to Main St from Tufts Sq to Broadway
T104	Malden Center to Airport Station via Everett and Chelsea	Rerouted to Airport Station instead of Wood Island and to Spruce St for closer connection to Market Basket
105	Saugus to Malden Center	Rerouted to Bowdoin St, Newland St, and Bryant St; extended to Square One Mall
106	Lebanon St Loop to Wellington via Malden Center	Rerouted between Main St and Wellington; see route 99 for service to Gateway Center
108	Wellington to Linden Sq via Malden Center and Kennedy Dr	Extended from Malden Center to Wellington via Middlesex Ave, Riverside Ave, and Fellsway; extended to Linden Sq
T109	Everett to Harvard Sq via Sullivan and Union Sq	Rerouted to Eastern Ave from Linden Sq to Broadway; see route 108 for service on Salem St/Hunting St
T110	Wellington to Wonderland via Everett	No change since May proposal
T111	Woodlawn to Haymarket via Chelsea	No change since May proposal
112	Admiral's Hill and Soldier's Home in Chelsea to Maverick via Bellingham Sq	Extended to Maverick Sq
113	Bellingham Sq to Assembly via Everett	Added route from Bellingham Sq in Chelsea to Assembly Sq via Sullivan Sq, see route 90 for service to Davis Sq
T116	Wonderland to Maverick via Chelsea	No change since May proposal
119	Winthrop to Revere via Orient Heights Station	Extended to Cottage Hill and Winthrop Public Landing ferry parking lot
120	Winthrop to Maverick via Orient Heights	Extended to Cottage Hill and Winthrop Public Landing parking lot; rerouted through Orient Heights
131	Malden Center to Melrose Highlands, Stoneham, and Woburn	Restored existing route 131 between Malden Center and Melrose; extended to Stoneham and Woburn instead of Lynn as proposed; frequency adjusted
132	Stoneham to Malden Center	Extended service to 12AM



Highlight denotes a route that was changed since the May 2022 proposal.



Route	Route Description	What we changed from the May 2022 Proposal
133		Removed proposed Route 133; see restored routes 134, 354, and extended 131 for service to Woburn
134	North Woburn to Wellington via Medford Sq	Restored North Woburn to Wellington route; rerouted via Locust St and Mystic Valley Pkwy in Medford; extended service to 1AM; see route 354 for service to Burlington
137	Reading to Malden Center via Wakefield	Rerouted to loop service counter-clockwise through Reading
201	Fields Corner Loop via Neponset Ave	Restored to existing route 201
202	Fields Corner Loop via Adams St	Restored to existing route 202
210	Quincy Center to Fields Corner via North Quincy	Restored to existing route to Fields Corner; see route 215 for Ashmont connection
211	Squantum to Quincy Center via North Quincy	Extended to new stop at Marina Bay
215	Quincy Center to Ashmont via West Quincy	Restored to existing route to Ashmont; see route 210 for Fields Corner connection
216	Houghs Neck to Quincy Center via Germantown	Improved frequency
217	Quincy Center to Ashmont via North Quincy	No change since May proposal
220	Hingham Depot to Quincy Center	No change since May proposal
222	East Weymouth to Quincy Center	No change since May proposal
225	Weymouth Landing to Quincy Center	Extended service to 12AM
226	Columbian Sq to Braintree Station	Extended service to 12AM
230	Montello Station to Quincy Center	Restored to existing route to Quincy Center; extended service to 12AM
236	South Shore Plaza to Quincy Center	Restored existing route 236 service to South Shore Plaza; replaced proposed route 237
237		Removed proposed 237; see route 236 for service to South Shore Plaza
238	Holbrook/Randolph Station to Quincy Adams	Restored existing Centre St, West St, Willard St, and Granite St service instead of I-93; extended service to 11PM
240	Avon Sq to Ashmont	Restored current connection to Avon Sq and Holbrook/Randolph Commuter Rail Station; extended service to 1AM
245	Quincy Center to Mattapan Sq	Reverted to existing weekday only service
350		Removed proposed route 350; see route 80 for service from Burlington to Red Line via Arlington Center
351	Bedford Woods Dr - Third Ave	No change since May proposal
354	North Burlington to State St, Boston	Restored route 354 express service from Burlington and Woburn to downtown Boston via Medford Sq and I-93; rerouted to Cummins Center via Washington St and Salem St in Woburn on reverse-peak direction trips; see also related changes to routes 80, 94, 131, and 133
426	Central Sq, Lynn to Wonderland	No change since May proposal
429	Northgate Shopping Center to Central Sq, Lynn	Restored existing route 429 ; rerouted for direct connection to Square One Mall
435	Salem Depot to Central Sq, Lynn via Liberty Tree Mall	Reduced proposed frequency, note that proposal maintains improved frequency over existing service including on Sundays
436	Liberty Tree Mall to Central Sq, Lynn	No change since May proposal
439	Nahant to Central Sq, Lynn	No change since May proposal
442	Marblehead to Wonderland via Central Sq, Lynn	No change since May proposal



Highlight denotes a route that was changed since the May 2022 proposal.



Route	Route Description	What we changed from the May 2022 Proposal
450	Salem Depot to Wonderland	No change since May proposal
451	North Beverly Station to Salem Depot	Restored existing service from North Beverly Station to Salem Depot; removed proposed stop at Beverly Station; rerouted from Bridge St to Ayube Memorial Dr
455	Salem Depot to Wonderland	No change since May proposal
501	Brighton Center to Downtown Boston	No change since May proposal
504	Watertown Sq to Downtown Boston	Added midday service
505	Waltham Commuter Rail Station to Downtown Boston via Newton	Extended via Lexington St, Commonwealth Ave, and Washington St to West Newton on-ramp; rerouted via Crescent St instead of Moody St; see routes 56 or 58 for River St and Washington St local service
714	Pemberton Point, Hull to Station St, Hingham	No change since May proposal
716	Cobbs Corner to Mattapan Sq	No change since May proposal
SL1	Logan Airport to South Station	No change since May proposal
SL2	Drydock Ave to South Station	Promoted to high frequency service, 7 days per week
SL3	Chelsea to South Station	No change since May proposal
SL4/5	Nubian to South Station	No change since May proposal

 Highlight denotes a route that was changed since the May 2022 proposal.

